Missouri Nursery Pest News

Office of the State Entomologist
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Visit us on the Internet at www.mda.state.mo.us

Timely information for Missouri's green industry!

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A new season approaches! PREVENTION and MONITORING TIPS

Recent Observations and Notes from Field Staff

As you are receiving plant material this spring, be sure to check for pest problems. Cankered areas, borer damage on bark, scale or egg masses, and rust galls are some common pests on new woody-type plants (be sure to check under the tree wraps), as well as some root-infesting pests like weevils and beetles. Signs of virus (mottled, yellow streaking, mosaic patterns, and improper growth), downy mildew, and other fungal infections are often seen early in the growing period on perennials and some annuals. Damage from foliar nematodes is most often found later in the growth period, but careful scouting could prove worthy. Besides interveinal chlorosis and necrosis, look for small areas of coal black spotting/streaking basically on and around the petiole area of the leaf. Also in early and mid-season look for unusual crinkling of leaves, (i.e. - uncommon to that variety). Keeping weeds under control in lath and greenhouses serves as a control for overwintering insects.

If possible, segregate incoming plants as much as possible to avoid spreading disease to healthy plants. Also, keeping track of shipping invoices and records will help us track down pest problems that do occur.

Many scale insects (such as euonymus, obscure, oystershell, pine needle, rose, San Jose, tulip tree scale, etc.) can be controlled at this time of year using a dormant oil prior to bud break.

Deploy pheromone traps in early March for detecting emergence of Lilac/Ash Borer.

For further information see: Scale Insects of Trees and Shrubs, Wawrzynski, R.; Ascerno, M.; U of MN Extension publication FO-01019; http://www.extension.umn.edu/distribution/horticulture/DG1019.html

Next issue – Greenhouse disease management tips and more!

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FUNGAL DISEASES CAUSED BY *TAPHRINA* SPECIES
OAK LEAF BLISTER, PEACH LEAF CURL, PLUM POCKETS, ETC.

- Over 50 species of *Taphrina* occur in North America.

- Hosts: In Missouri the most common species affected are *Prunus* (especially peach, nectarine, and plum), oak and elm. Most are somewhat host specific. For example, the *Taphrina* that affects oak is not the same one that affects peach.

- Life cycle and damage:
  - ✓ Single celled spores exist as yeast-like saprophytes on bark and bud scales
  - ✓ At or shortly after bud break spores infect undifferentiated leaf, shoot or floral parts
  - ✓ Most infection occurs in cool wet weather
  - ✓ Infected cells grow larger than uninfected cells causing:
    - Leaf blisters of oak and elm
      - Infection does not usually significantly affect tree health
      - Slightly raised puckered areas of the leaf occur in spring
      - Spots are usually less than one inch in diameter
      - Upper surface of spots is lighter green than normal tissue
      - Lower surface may appear gray or whitish when spores are produced
      - Affected areas eventually turn brown
    - Peach leaf curl
      - Affects peach, nectarine, apricot and occasionally other *Prunus* species
      - Pale to reddish areas appear on leaves or shoots in spring
      - Areas become thickened and distorted
      - Distorted areas are often brittle
      - May develop whitish areas when spores are produced
      - Fruit not usually infected but leaf loss can reduce yields
    - Plum pockets
      - Occasionally affects *Prunus* other than plum
      - Common in several wild plum species
      - Some cultivated plums are resistant
      - Primarily infects fruit, but shoots and leaves may be affected.
      - Causes fruit to grow to several times size of normal fruit
      - Affected fruits are spongy or hollow, eventually darken, dry (into the pockets of the name), and drop from tree
  - ✓ Spores are produced in microscopic sacks (asci) which form on the surface of the affected plant part in spring
    - Asci with spores are responsible for the whitish "bloom" often seen on affected plants parts around 4-8 weeks after infection
    - Spores from the asci which fall on young branches soon bud to produce many one celled spores which will survive as yeast-like saprophytes on the branch surface and, later, on the bud

- These yeast-like spores are the spores that infect at bud break

- Control tips
  - ✓ Leaf blister need not be controlled on ornamentals unless symptoms have caused serious disfiguration in previous year because plant health rarely seriously affected
  - ✓ If you are shipping to another state some diseases caused by *Taphrina* species (including leaf blister) may be of concern. Check the regulations of the state in question.
  - ✓ Can be well controlled by a single **dormant season** application of an effective fungicide.
  - ✓ Any fungicide to control diseases caused by *Taphrina* **must** be applied between leaf drop in the fall and when buds swell in late winter. **Once bud break has occurred fungicides will not provide effective control.**
  - ✓ Below are some fungicides that have been effective against Taphrina diseases. Please note that these are not labeled for use on all hosts. For example, some products used on fruit trees are not labeled for ornamentals and vice versa, and most labels for products containing chlorothalonil state that they can only be used on oaks in the red oak group. Make sure that the product you choose can be used on the intended host.
    - Bordeaux mixture (6-6-100) and several other copper based fungicides
    - Liquid lime sulfur
    - Products containing chlorothalonil
    - Products containing ferbam (carbamate)
    - Products containing ziram

Sources of trapping and pheromone supplies
*This list is not intended as an endorsement of any particular company. Trapping and pheromone supplies are available from a number of sources.

Great Lakes IPM
10220 Church Rd., NE
Vestaburg, MI 48891
517-268-5693 / -5911
FAX: 517-268-5311
E-mail: glipm@nethawk.com
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Albany International Corp.
110 A Street
Needham, MA 02194
800-343-1164
****

Gempler's
100 Countryside Dr.
PO Box 270
Belleville WI 53508
800-382-8473
www.gemplers.com

It is suggested that you request general catalog or price list.

LILAC/ASH BORER

Podosesia syringae
Lepidoptera: Sessiidae

I. DESCRIPTION: Lilac/Ash borer

- Adult is a clearwing moth, strongly resembling a wasp, about 18-24 mm in length with 24-32 mm wingspan
- The body is brownish-black marked with chestnut red
- Larva is a caterpillar, creamy white in color with a brown head, approx. 26-34 mm at maturity

II. HOSTS: Lilac/Ash borer

- Fraxinus spp. (Green and White Ash)
- Syringae spp. (Lilac)

III. DAMAGE: Lilac/Ash borer

- The larvae bore into the wood of the host plant creating holes in the trunk and main crotch area
- Allow entrance holes for secondary infestations of insects and diseases

IV. LIFE CYCLE: Lilac/Ash borer

- Overwinters as nearly mature larva in the trunk or cane of the host
- Larva matures and pupates in the spring
- Adults emerge from early to mid-April thru June
- Eggs are laid on the bark of the host plants
- Usually one generation per year

V. INSPECTION TIPS: Lilac/Ash borer

- Sap mixed with fine frass oozing from small openings in the bark
- Light brown-tan colored sawdust-like frass
- Later frass extrudes in small clumps evident at entrance hole and at base of the plant
- Males readily attracted to pheromone traps

VI. CONTROL TIPS: Lilac/Ash borer

- Avoid mechanical injury to plants
- Maintain healthy plants to discourage oviposition
- Monitor adult flight activity with pheromone traps
- Chemical control using Dursban or Lindane applied to trunks and canes when adults begin flying and continued until flight period ends (mid April-mid June)

VII. COINCIDE TIMING: Lilac/Ash borer

- Begin treatment as Spirea X vanhouttei is in full to late bloom and repeat 3-4 weeks later, depending on residual
  activity of chemical (DDB50: 275-500).